

ABSTRACT OF THE DISCLOSURE

This invention relates to a semiconductor substrate processing apparatus and method for forming interconnects by filling a circuit pattern groove and/or a hole formed in a semiconductor substrate with a plated metal film, and removing the plated metal film while leaving the metal film at the filled portion. The apparatus comprises a carry-in and carry-out section for carrying in and carrying out a semiconductor substrate, which has a circuit formed on a surface thereof, in a dry state; a plated metal film forming unit for forming a plated metal film on the semiconductor substrate which has been carried in; a bevel etching unit for etching a peripheral edge portion of the semiconductor substrate; a polishing unit for polishing at least part of the plated metal film on the semiconductor substrate; and a transport mechanism for transporting the semiconductor substrate between the above units.